

In the Claims:

1. (Currently Amended) A method of optimizing reconnection of a point to point protocol link layer in a mobile device comprising the steps of:

initializing a stabilization counter;

monitoring whether the mobile device has entered a new zone from an original zone;

starting a stabilization period when the mobile device enters a new zone;

incrementing said stabilization counter and determining whether said stabilization counter equals a maximum value after said incrementing step, and if so, then canceling said stabilization period and performing a reconnection;

checking whether the mobile device enters a different zone during the stabilization period;

if the mobile device enters a different zone during the stabilization period, restarting the stabilization period and performing said incrementing, determining and checking steps; and

if the mobile device does not enter a ~~new~~ different zone during the stabilization period, determining whether the mobile device is in a new zone or said original zone, reconnecting to the new zone if the mobile device is in the new zone, and otherwise performing no reconnection if the mobile device is in the original zone.

2. (Original) The method of claim 1, wherein said monitoring step looks for a change in a network identifier.

3. (Original) The method of claim 1, wherein said monitoring step looks for a change in a network identifier.

4. (Original) The method of claim 1, wherein said monitoring step looks for a change in a packet zone identifier.

5. (Original) The method of claim 1, wherein said starting step includes setting a stabilization timer.

6. (Original) The method of claim 5, wherein the duration of said stabilization timer is less than one minute.

7. (Original) The method of claim 5, wherein the duration of said stabilization timer is more than one minute.

8-13 (Cancelled)

14. (Currently Amended) The method of claim [[8]] 1, wherein said method further comprises the steps of:

initializing a max return counter after said monitoring step finds the mobile device has entered a new zone;

testing whether the device is in an said original zone after a different zone is detected during said checking step;

if said mobile device is in said original zone, incrementing the max return counter and determining whether the max return counter has reached a threshold level and if said max return counter has reached a threshold level, canceling the stabilization period and performing a reconnection in said original zone.

15. (Currently Amended) The method of claim [[8]] 1, wherein said method further comprises the steps of:

initializing and starting a countdown timer after said monitoring step finds the mobile device has entered a new zone;

testing whether the device is back in an said original zone after said different zone is detected during said checking step;

if said mobile device is in said original zone, determining whether said countdown timer has expired, and if said countdown timer has expired canceling the stabilization period and performing a reconnection in said original zone.

16. (Original) The method of claim 15, further comprising the steps of:

determining whether said countdown timer has expired if said checking step finds said mobile device is not in said different zone,

if said countdown timer has expired, checking whether said mobile device is in said original zone, and if yes canceling said stabilization period and performing a reconnection.

17. (Original) The method of claim 14, wherein said method further comprises the steps of:

initializing and starting a countdown timer after said monitoring step finds the mobile device has entered a new zone;

if said mobile device is in said original zone after said testing step, determining whether said countdown timer has expired, and if said countdown timer has expired canceling the stabilization period and performing a reconnection in said original zone.

18. (Original) The method of claim 17, further comprising the steps of:

determining whether said countdown timer has expired if said checking step finds said mobile device is not in said different zone.

if said countdown timer has expired, checking whether said mobile device is in said original zone, and if yes canceling said stabilization period and performing a reconnection.

19. (New) A method of optimizing reconnection of a point to point protocol link layer in a mobile device comprising the steps of:

monitoring whether the mobile device has entered a new zone from an original zone;

initializing a max return counter after said monitoring step finds the mobile device has entered a new zone;

starting a stabilization period when the mobile device enters a new zone;

checking whether the mobile device enters a different zone during the stabilization period;

testing whether the device is in said original zone after a different zone is entered during said checking step and, if said mobile device is in said original zone, incrementing the max return counter and determining whether the max return counter has reached a threshold level and if said max return counter has reached a threshold level, canceling the stabilization period and performing a reconnection to said original zone;

if the mobile device enters a different zone during the stabilization period, restarting the stabilization period and performing said checking and testing steps; and

if the mobile device does not enter a different zone during the stabilization period, determining whether the mobile device is in a new zone or said original zone, reconnecting to the new zone if the mobile device is in the new zone, and otherwise performing no reconnection if the mobile device is in the original zone.

20. (New) The method of claim 19, wherein said monitoring step looks for a change in a network identifier.

21. (New) The method of claim 19, wherein said monitoring step looks for a change in a network identifier.

22. (New) The method of claim 19, wherein said monitoring step looks for a change in a packet zone identifier.

23. (New) The method of claim 19, wherein said starting step includes setting a stabilization timer.

24. (New) The method of claim 23, wherein the duration of said stabilization timer is less than one minute.

25. (New) The method of claim 23, wherein the duration of said stabilization timer is more than one minute.

26. (New) The method of claim 19, wherein said method further comprises the steps of:
initializing and starting a countdown timer after said monitoring steps finds the mobile device has entered a new zone;

if said mobile device is in said original zone after said testing step, determining whether said countdown timer has expired, and if said countdown timer has expired canceling the stabilization period and performing a reconnection to said original zone.

27. (New) The method of claim 26, further comprising the steps of:
determining whether said countdown timer has expired if said checking step finds said mobile device is not in said different zone,

if said countdown timer has expired, checking whether said mobile device is in said original zone, and if so, then canceling said stabilization period and performing a reconnection.

28. (New) A method of optimizing reconnection of a point to point protocol link layer in a mobile device comprising the steps of:

monitoring whether the mobile device has entered a new zone from an original zone;
initializing and starting a countdown timer after said monitoring step finds the mobile device has entered a new zone;

starting a stabilization period when the mobile device enters a new zone;
checking whether the mobile device enters a different zone during the stabilization period;

testing whether the device is back in said original zone after said different zone is entered during said checking step and if said mobile device is in said original zone, determining whether said countdown timer has expired, and if said countdown timer has expired canceling the stabilization period and performing a reconnection in said original zone;

if the mobile device enters a different zone during the stabilization period, restarting the stabilization period and performing said checking and testing steps; and

if the mobile device does not enter a different zone during the stabilization period, determining whether the mobile device is in a new zone or said original zone, reconnecting to the new zone if the mobile device is in the new zone, and otherwise performing no reconnection if the mobile device is in the original zone.

29. (New) The method of claim 10, further comprising the steps of:

determining whether said countdown timer has expired if said checking step finds said mobile device is not in said different zone,

if said countdown timer has expired, checking whether said mobile device is in said original zone, and if yes canceling said stabilization period and performing a reconnection.

30. (New) The method of claim 28, wherein said monitoring step looks for a change in a network identifier.

31. (New) The method of claim 28, wherein said monitoring step looks for a change in a network identifier.

32. (New) The method of claim 28, wherein said monitoring step looks for a change in a packet zone identifier.

33. (New) The method of claim 28, wherein said starting step includes setting a stabilization timer.

34. (New) The method of claim 33, wherein the duration of said stabilization timer is less than one minute.

35. (New) The method of claim 33, wherein the duration of said stabilization timer is more than one minute.